

Undefined Terms

Term	Description	Representation	Name	Example
Point	Does not have actual size Used to show a position	A dot	Named using a capital block letter.	point A
Line	Has no thickness or width Extends indefinitely in two directions Is always straight	A line, with arrows on both ends	Named using two points on the line or a smaller case cursive letter.	line l , \overleftrightarrow{AB} , \overleftrightarrow{BA}
Plane	Flat surface Extends indefinitely in all directions	Parallelogram, even though a plane has no edges	Named using three non-collinear points in the plane, or a capital cursive letter	Plane M or Plane ABC

Defined Terms

Term	Definition	Picture	Name
Line Segment	Part of a line that consists of two points, called endpoints, and all points on the line that are between the endpoints. Also called <i>segment</i> .		\overline{AB} with endpoints A and B.
Endpoints	The points at the end of a line segment.		\overline{AB} with endpoints A and B.
Ray	Part of a line that consists of a point called an endpoint and all points on the line that extend in one direction.		\overrightarrow{AB} with endpoint A.
Opposite Rays	If point C lies on \overleftrightarrow{AB} between A and B , then \overrightarrow{CA} and \overrightarrow{CB} are opposite rays.		\overrightarrow{CA} and \overrightarrow{CB} are opposite rays.
Collinear Points	Points that lie on the same line.		A , B , and C are collinear.
Coplanar Points	Points that lie in the same plane.		A , B , and C are coplanar.

1. Give 2 other names for each of the following in Figure 1:

a. \overleftrightarrow{SP}

b. Plane \mathcal{R}

2. Using Figure 1:

a. Name 3 points that are collinear.

b. Name 4 points that are coplanar.

3. Using Figure 2:

a. Give another name for \overleftrightarrow{GH} .

b. Name all rays with endpoint J. Which of these are opposite rays?

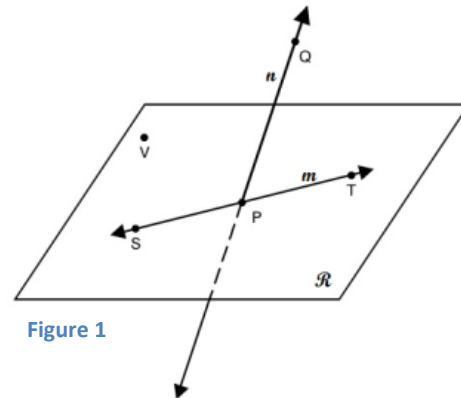


Figure 1

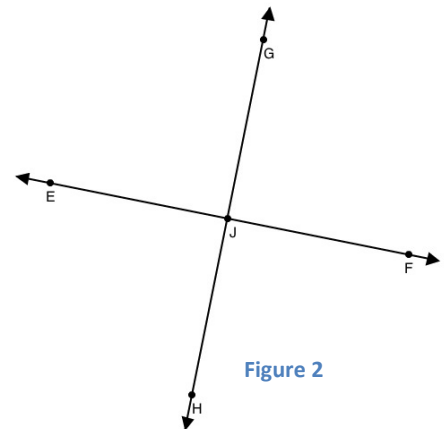
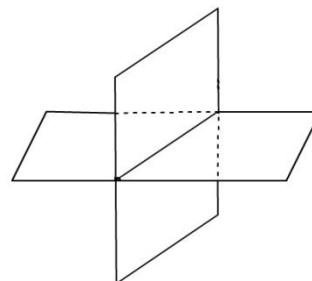
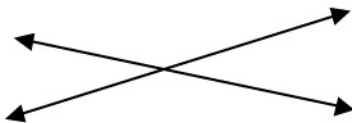


Figure 2

Intersection:



4. Create the following sketches

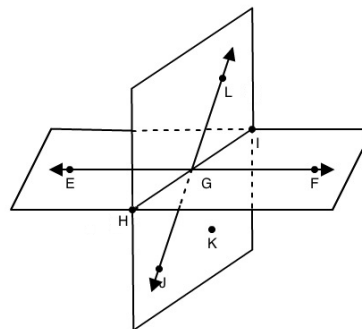
a. Sketch a plane and a line \overleftrightarrow{AB} that is in the plane.

b. Sketch a plane and a line \overleftrightarrow{AB} that does not intersect the plane.

c. Sketch a plane and a line \overleftrightarrow{AB} that intersects the plane at point P.

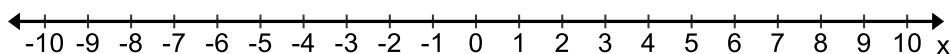
5. Using Figure 3.

- Name the intersection of \overline{EF} and \overline{HI} .
- Name the intersection of plane EGF and plane JGK.

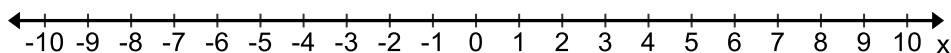


6. Graph each of the following inequalities on a number line. Tell whether the graph represents a segment, a ray or rays, a point or a line.

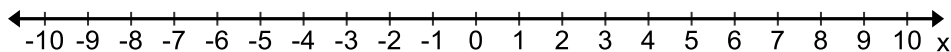
- $x \geq 5$



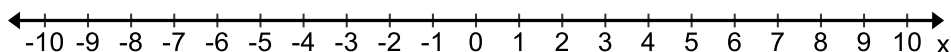
- $-2 \leq x \leq 4$



- $x = -3$



- $x \leq -4$ or $x \geq 3$



Homework Assignment

1.1 Page 5

1-11 all, 13-22 all, 24-29 all, 34, 35, 40, 41, 42, 44-48 evens.

Geometry Notes

1.1 Identify Points, Lines and Planes

Name: _____

Period: _____ Date: _____

EXTRA PAGE FOR NOTES, QUESTIONS AND EXAMPLES